SEMESTER EXAMINATION, DECEMBER - 2024

Course Name: -B.Tech CSE **Semester: - V**

Paper Name: - Software Engineering **Paper Code: -TCS 503**

Time – 3 Hrs + 20 minutes per hour extra time for V.I. & examinees with writer. **Max Marks-70**

समय– 3 घण्टे + 20 मिनट प्रति घंटे अतिरिक्त–दृष्टिबाधित एवं राइट लेखक परीक्षार्थियों के लिए। अधिकतम अंक–70

Instructions:

- The question paper consists of three sections namely A, B, C. All sections are compulsory.
- Section A- Each question carries **3 mark. All questions are compulsory.**
- Section B- Answer any **5 out of 7** given questions. Each question carries **7 marks.**
- Section C- Answer any **2 out of 3** given questions. Each question carries **10 marks.**
- Section D - **All questions are compulsory.** Each question carries **2 mark**

Section - A
Objective Questions

1. Answer all the following questions. **5x3 =15**

(i) Software Debugging is known as _____

a. identifying the task to be computerized
b. creating program code
c. finding and correcting errors in the program code
d. creating the algorithm

(ii) Which one of the following models is not suitable for accommodating any change?

a. Prototyping Model
b. Spiral Model
c. Waterfall Model
d. None of these

(iii) *What are the types of requirements?*

a. *Availability*
b. *Usability*
c. *Reliability*
d. All of the mentioned

(iv) Which of the following is not a maturity level in CMM?

a. Design
b. Managed
c. Repeatable
d. Optimizing

(v) "Software engineers should not use their technical skills to *misuse* other people's computers." Here the term *misuse* refers to:

a. Unauthorized access to computer material
b. Unauthorized modification of computer material
c. Dissemination of viruses or other malware
d. All of the mentioned

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Section - B
Short Answer Questions

2. **Answer any five of the following questions.** 5x7=35

i. What is Software Engineering? Explain different phases of SDLC in detail.

ii. Differentiate between Waterfall model and Iterative model. Explain role of ISO 9000.

iii. What is Software version control? Explain various tasks of Requirement Engineering.

iv. Explain SQA & its PDCA cycle. Elaborate the role of cyclometric complexity.

v. Describe Testing & various types of testing. Differentiate between black & white box testing.

vi. Explain Change control process. Describe risk and various types of risk.

vii. Write short note on:

(a) Reverse Engineering

(b) Software Metrics.

(c) verification & validation

Section - C
Descriptive Questions (विवरणात्मक प्रश्न)

3. **Answer any two of the following questions.** 2x10=20

i) Explain SPM & its need & cost. Also explain various types of Maintenance. Write a key difference between cohesion and coupling.

ii) Explain COCOMO also explain different development modes. What are the three levels proposed & by whom. Also write the equations on which COCOMO depend.

iii) Explain CMM model in detail. Describe SCM & various SCM activities.

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Section - D
Objective Questions

4. **Answer all the following questions.** 10x2 =20

(i) Why do bugs and failures occur in software?

a) Because of Developers
b) Because of companies
c) Because of both companies and Developers
d) None of the mentioned

(ii) _____ specification is also known as SRS document.

a) white-box
b) grey-box
c) black-box
d) none of the mentioned

(iii) The word which describes the importance of software design is?

a) Complexity
b) Quality
c) Efficiency
d) Accuracy

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(iv) What is a Functional Requirement?
a) specifies the tasks the program must complete
b) specifies the tasks the program should not complete
c) specifies the tasks the program must not work
d) All of the mentioned _____.

(v) Which one is not a risk management activity?
a) Risk assessment
b) Risk generation
c) Risk control
d) None of the mentioned

(vi) What all has to be identified as per risk identification?
a) Threats
b) Vulnerabilities
c) Consequences
d) All of the mentioned

(vii) Which of the following is not a goal of project management?
a) Avoiding customer complaints
b) Maintaining a happy and well-functioning development team
c) Delivering the software to the customer at the agreed time
d) Keeping overall costs within budget

(viii) Which one of the following is a requirement that fits in a developer's module?
a) Availability
b) Testability
c) Usability
d) Flexibility

(ix) Selection of a model is based on
a) Requirements
b) Development team & Users
c) Project type and associated risk
d) All of the mentioned

(x) Which of the following is a field related to certification?
a) Person
b) Process
c) Product
d) All of the mentioned

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